Ellen. Ross

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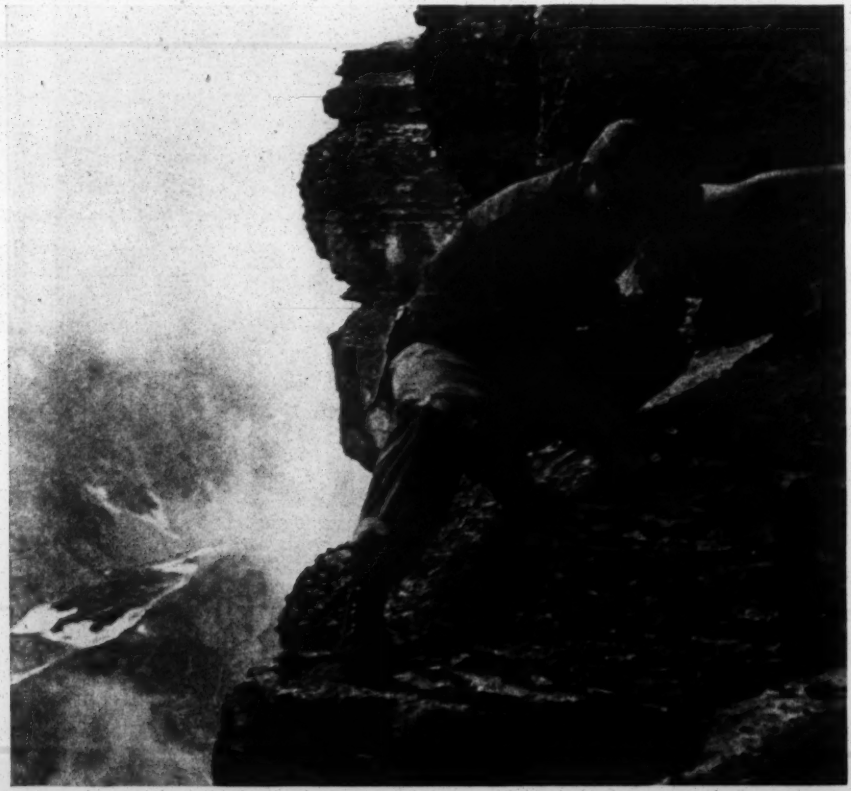

FRANK AND JOHN CRAIGHEAD

HIGH IN THE GRAND TETONS, A NATURALIST RISKS LIFE AND LIMB FOR A TINY ALPINE BLOSSOM

The most jagged natural skyline in the United States saws the clouds at 10,000 to 13,700 feet in northwest Wyoming. The most spectacular part lies in Grand Teton National Park (Bulletin No. 3).

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Bulletin No. 1, February 6, 1950

Planes Rain U.S. Visitors on Tropic Cuba

DURING the winter season, 28 daily Pan American flights connect Miami, Florida, and Havana (Habana). They carry 400 people to or from the Cuban capital, slightly more than an hour's trip. That short flight between the English- and Spanish-speaking worlds takes United States travelers to an island realm which greatly differs from, yet often reminds them of, their own country.

Havana, whose metropolitan area contains about one-sixth of Cuba's 5,000,000 people, nearly matches New York in hustle and bustle. The energetic inhabitants carry on rapid-fire conversation as they pass on the crowded streets and keep it up as long as possible, even after one or the other has leapt aboard a *guagua* (an ancient bus, pronounced wah-wah).

Guagua Drivers Rely on Horn

Chances are part of the crowd on the bus is heading for a baseball game, for baseball pushes cock-fighting and jai alai as the most popular sport in Cuba. It was first played to taunt the unpopular Spanish overlords of the island.

Travelers bring back amusing tales of the guagua drivers. The horn is the most important instrument on their vehicles, which rarely come to a complete stop. Passengers jump onto the loading steps as the bus careens by. There are few traffic signals to inhibit the drivers. Occasionally a race develops if one tries to pass another. Policemen sometimes stop a guagua and charge the driver with several traffic offenses on the logical theory that he undoubtedly had committed them during the day.

Havana also abounds with chauffeurs of for-hire cars who accost travelers at the docks and airports with offers of transportation. They drive their fares to El Morro, the huge Spanish fortress at the entrance to the bay; along the Malecón, a wide boulevard following the rocky coast; to the Capitolio, the Cuban capitol which looks much like the one in Washington, D. C.; or to the famous entertainment quarter, including Sloppy Joe's.

In Havana Bay, the battleship *Maine* was blown up on February 15, 1898, to precipitate the Spanish-American War and free Cuba from Spain. The United States actively supervised Cuba until 1909 and retained the right to intervene in its affairs until 1934. Hemisphere defense, tourism, and sugar are today's chief ties between the two countries.

Sugar Cane and Tobacco Are Big Crops

Visitors who travel east from the Havana area along the Central Highway to Santiago de Cuba—a distance almost as great as from Chicago to Washington—pass countless sugar plantations. Spotted over the lush tropical countryside are *centrales* (illustration, next page) where the cane is milled into sugar and its by-product, blackstrap molasses. The United States buys 90 per cent of Cuba's sugar.

West from Havana in Pinar del Rio Province, tobacco is the big crop.

ENTERED AS SECOND CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
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BRITISH INFORMATION SERVICE

MORE THAN A BOY'S FINGER IS NEEDED TO PLUG THIS HOLE IN A WALCHEREN ISLAND DIKE

Willow mats, concrete caissons, landing craft, tons of sand and stone, and dozens of men worked months to seal four breaks in the great walls that hold back the sea (left) from this Netherlands island (Bulletin No. 5). British blockbusters breached the dikes to flood German guns during the Allied assault that ended World War II.

Bulletin No. 2, February 6, 1950

South Africa Boers Remember Pioneer Heroes

A MIGHTY demonstration, planned for ten years and commemorating events of 100 and more years ago, was recently held near Pretoria in the Union of South Africa. The "national shrine" of the Boers was dedicated as 250,000 looked on—one-tenth of the dominion's white population.

The huge square granite monument to the Voortrekkers—South Africa's counterparts of North America's covered-wagon pioneers—stands on a hill outside Pretoria. Around it in stone is a circle of protective wagons, drawn up for battle against the Zulus in the same fashion that the Oregon Trailers circled their vehicles to withstand the Indians.

Voortrekkers Marched and Fought in 1830's

Unlike America's Western pioneers, however, the Boers pushed inland to get away from an unwanted ruling power and establish independent governments. The Boers (from the Dutch for farmer) settled at Capetown and environs while the region was governed by the Dutch East India Company. England occupied the colony in 1806.

In 1835 the Boers began the Great Trek—a series of covered-wagon marches—into the virtually unknown hinterland. They fought Zulus and other fierce Bantu tribesmen. They established three republics—the Orange Free State, the Transvaal, and Natal.

On the Great Trek (or *Voortrek*) Piet Retief bargained with the Zulu king—Dingaan—for ownership of most of Natal. The king agreed. While his warriors entertained the guests with a war dance, he gave a signal. The spearmen murdered Retief and 70 of his Boers. It is these men whom the giant monument memorializes.

Later that year—1838—Andries Pretorius and his group of trekkers annihilated Dingaan in the Battle of Blood River, using the circled-wagon technique. Dingaan's Day is still observed as a "holy sabbath" of quiet rejoicing by the Boers. The son of this leader became president of the Transvaal and gave the family name to his country's capital—Pretoria.

A Two-in-one Country

The Boer republics—as such—did not last long. Natal, on the sea, was turned into a British colony shortly after its founding. The Boer War of 1899-1902 resulted in the British annexation of the Transvaal and Orange Free State. In 1910 the three Boer areas joined Cape of Good Hope Colony to form the Union of South Africa—a dominion in the British Commonwealth of Nations three times as big as California.

Because of the dual nature of the new nation, South Africa became a "two-in-one" country. It has two languages—English and Afrikaans; two capitals—Capetown and Pretoria; two flags, and two anthems. Boer influence has increased recently, with Premier Malan's nationalist party supplanting the more moderate united party of aging Jan Christiaan Smuts.

A third element in the country is its Bantu millions— descendants of Dingaan's men. They outnumber the whites by nearly 8,000,000 to 2,500,000. They have little or no voice in the government, especially under the present regime.

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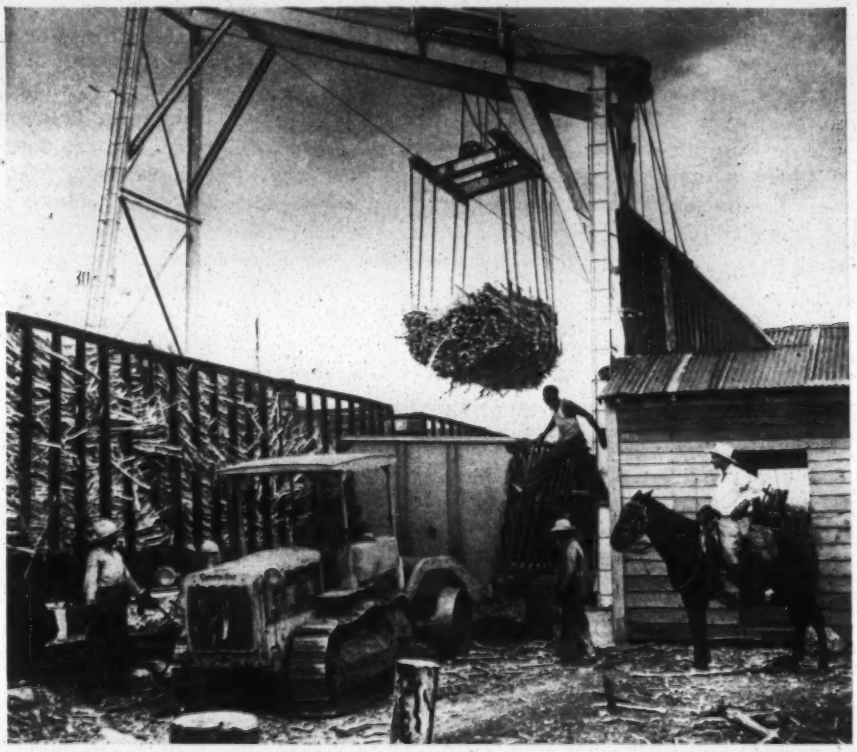
The type grown is poor for cigarettes, but among the best in the world for cigar wrappers. Many cigars are made from this leaf in the Cuban capital, hence the word "Havana"—synonym for a fine cigar. The tobacco plant is native to the island. Sugar was introduced by the Spaniards in their long rule from 1492 to 1898.

Columbus discovered Cuba on his first voyage and extolled its beauty and fertility, thinking it was China. He sent ambassadors inland to call on the Chinese emperor. Instead, his men found a thatch village of 50 huts called Cubanacán. "Cuba" is a shortening of this Indian name.

Cuba is about the size of Pennsylvania, but with only the population of New Jersey. It is the largest of the Greater Antilles and thus of the entire West Indies. Its climate is similar to that of south Florida, though it has a more distinct rainy season (May to November). Frost never visits the fields. "Winter" temperatures average 75 degrees Fahrenheit, reason enough for the influx of northern visitors.

NOTE: Cuba may be located on the National Geographic Society's map of the Countries of the Caribbean. Write the Society's headquarters, Washington 6, D. C., for a price list of maps.

For further information, see "Cuba—American Sugar Bowl," in the *National Geographic Magazine* for January, 1947.



SUGAR RESEARCH FOUNDATION

MEN AND MACHINERY UNLOAD CUBAN CANE. SOON THE MILL WILL PRESS THE SUGAR FROM IT

Plantation owners have nearly 3,000 miles of private railroad tracks to bring cane in from the fields. During harvest months, everyone has work. Cubans call the rest of the year the "dead season."

Bulletin No. 3, February 6, 1950

Teton-Jackson Hole Parks Enriched by Gift

SOMETHING new and yet old has been added to Uncle Sam's Jackson Hole National Monument and Grand Teton National Park—twin public areas combining the "best of the West" in wild beauty and romantic history.

The Rockefeller family's gift to the United States government—comprising more than 33,000 acres of land lying within these two areas (map, next page)—is new by recent presentation. It is old because it includes a bit of the pioneers' "Wild West," to be held untouched for nature lovers amid the cultivated fields, ranches, and expanding communities of northwest Wyoming.

Still Haunt of Wild Animals

Just south of Yellowstone National Park, the Jackson Hole and Teton regions still present the scenes of natural grandeur (illustration, cover) which greeted the first explorers and fur trappers to push into the Rocky Mountain country of Indians and wild game. Then vast numbers of elk, moose, bison, black and grizzly bears, deer, and beaver populated these mountains and valleys.

Many wild animals still haunt the western Wyoming region. Motorists report that antelope race them along open-range roads; beavers often annoy farmers by damming irrigation ditches, and Jackson Hole ranchers have built high fences to protect their haystacks against marauding elk.

The first known white man to see the majestic Teton Range rising west of the lush green valley now known as Jackson Hole was John Colter. In 1807-8, this woodsman and trapper, previously a member of the Lewis and Clark expedition, crossed and recrossed the mountains. Traveling alone, with a 30-pound pack and gun, Colter also penetrated the northern wilderness on this trip, discovering the Yellowstone region.

After Colter came other pioneers, pushing westward or lingering to trap the valuable beaver and other fur-bearing creatures. Among famous characters associated with this territory in the boisterous days of the bearded, buckskin-clad "mountain men" were Kit Carson, Jim Bridger, and David Jackson, for whom Jackson Hole was named.

Spectacular Scenery in Tetons

In the 1880's, decades after the decline of the fur trade, the first permanent settlers began to arrive. Setting up small homesteads and big ranches, they started cattle and sheep raising operations which still form the region's leading industry.

The Grand Teton National Park occupies the most scenic part of the spectacular Teton Range. It was established in 1929. About 27 miles long, it is a show place of glaciers, rushing streams, and green forests; of deep canyons and towering mountains that reach a peak in Grand Teton, more than 13,700 feet high.

The long, flat-bottomed valley of Jackson Hole, paralleling Teton Range, is completely surrounded by mountains; hence its name. The Snake

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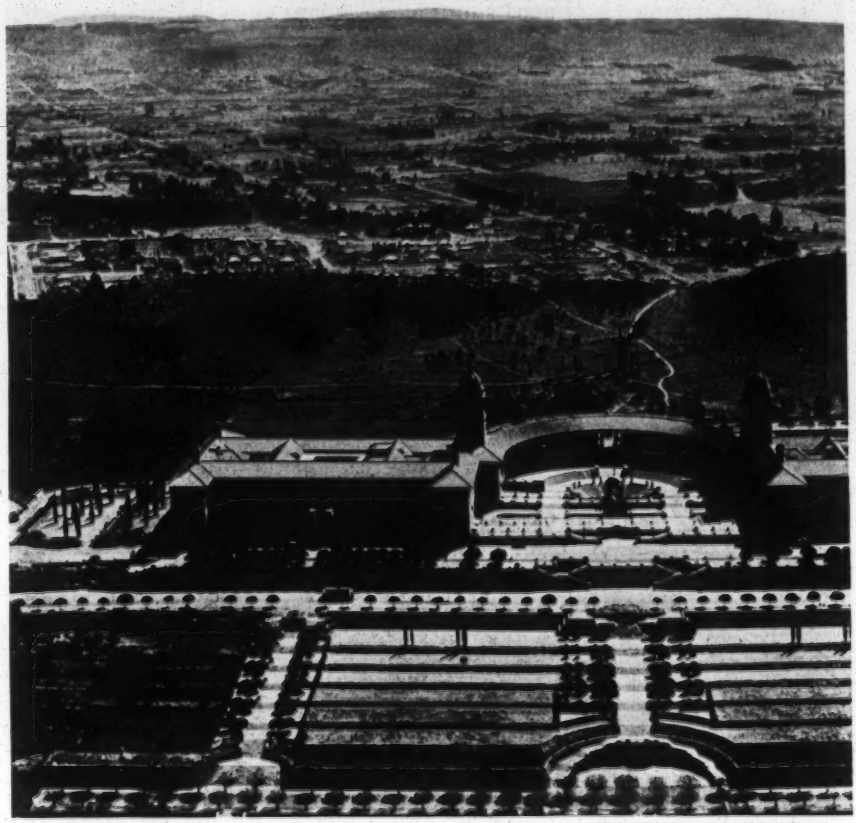
Today, the Transvaal is sometimes called the treasure chest of the union. In it are located the fabulously rich gold mines of the Witwatersrand (near Johannesburg) which have produced billions of dollars worth of the yellow wealth.

It also contains a giant crater from which men have blasted tons of diamonds. Silver and platinum add to the treasures of the Transvaal, as well as industrial "gold" in the form of coal, iron, copper, tin, and asbestos.

NOTE: The Union of South Africa may be located on the Society's map of Africa.

For additional information, see "Cities That Gold and Diamonds Built," in the *National Geographic Magazine* for December, 1942; "Busy Corner—the Cape of Good Hope," August, 1942*; and "Under the South African Union," April, 1931. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 24, 1949, "War and Weather Make Capitals Wander"; and "Natal's Indians and Zulus Renew Rioting," March 14, 1949.



UNION OF SOUTH AFRICA AIR SERVICE

PRETORIA'S UNION BUILDINGS OVERLOOK PART OF THE CITY AND A SECTION OF RAW VELDT

Thirty miles away Johannesburg and its Witwatersrand suburbs give South Africa a metropolis of more than a half-million. Since South Africa's city censuses count only those of European descent, this figure is much lower than actuality. Thousands of Bantus work in the mines.

Bulletin No. 4, February 6, 1950

Lemming Migration Drives Snowy Owl South

THE presence of the snowy owl south of the Canadian border this winter indicates that the lemmings are again on the march.

Although these events seem unrelated, they are closely connected by the freak behavior patterns of the little animal that is close kin to the familiar house and field mouse. A full-grown lemming may be five inches long from its furry nose to the tip of its tail. Its fur coat shades from light to dark reddish-brown, accented by a dark stripe along its backbone. Its beady eyes look out from a fluff of fur which almost hides its ears. Five sharp claws equip each foot for digging.

Lemmings' Death March Empties the Owls' Pantry

The lemming, whose usual home is northern Scandinavia and the American Arctic regions, is a sensitive, highly nervous creature, preyed on by the snowy owl and the other fowl and animal neighbors for their winter food.

Every few years, due to scarcity of vegetation or overpopulation, the lemmings seek relief in mass flight. On one of the world's strangest death marches, they swarm over mountains, swim rivers, and drive through forests. Hordes die along the way; others drown upon reaching the sea. This wholesale extinction destroys much of the normal food supply of the snowy owl and Arctic fur-bearing animals.

The wise old owl travels south for his health. He forages as far afield as the Carolinas. This year he is venturing deep into the middle Atlantic states. Lacking the mobility of the wide-winged owl, the fox and his friends stay behind in the wilds to struggle against starvation.

Some experts believe that it is the lemmings' fear of starvation that prompts their strange migration to death. The lemming subsists largely on the scant Arctic vegetation. Because the rodent produces at least two broods a year—numbering from three to eight—lemming colonies grow tremendously during the course of a year or two. As the population increases the meager vegetation becomes more scarce.

Legend Says Lemmings Seek Atlantis

Instinctively, the lemming prepares for migration and death when its numbers are too great for the available food supply. Stranger still, a small group of the colony does not migrate. It remains in the deserted home to establish a new nation of lemmings.

Legend has it that migrating lemmings in Norway and Sweden move to the sea and try to swim it in a vain search for the lost continent of Atlantis. Canadian lemmings, less likely to encounter water on their travels and, for the most part, farther from the sea, usually perish of exhaustion or starvation. All types of lemmings, however, change from shy, timid creatures to bold, pugnacious animals on their migration.

The most dangerous natural enemies of the lemming are the snowy owl, the Arctic fox, and the ermine, who depend almost entirely on the lemming for their winter meals. The snowy owl is a born and trained

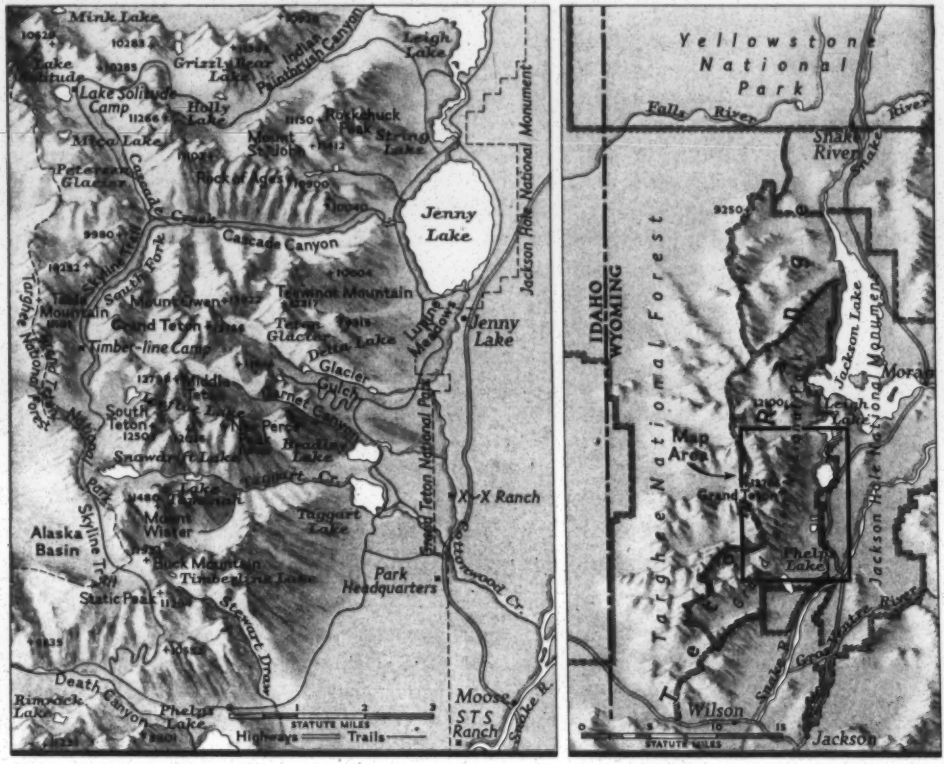
River flows through it. The valley was set aside as a national monument, by presidential proclamation, in 1943—amid much controversy.

Particularly interesting to visitors is the 1,500-acre area in the monument's northern section which was formally dedicated in 1948 as a wildlife park. Besides its numerous other animal attractions, there is a large elk herd which moves into the park for shelter and food each winter, after summering in the Teton highlands.

NOTE: Jackson Hole National Monument and Grand Teton National Park may be located on the Society's map of Northwestern United States and Neighboring Canadian Provinces.

For additional information, see "Cloud Gardens in the Tetons," in the *National Geographic Magazine* for June, 1948; and "Western National Parks Invite America Out of Doors," July, 1934.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, March 10, 1947, "Grand Teton, Wyoming Landmark and Lodestone"; and "Jackson Hole, Wyoming: a Bit of the Old West," February 26, 1945.



DRAWN BY H. E. EASTWOOD AND IRVIN E. ALLEMAN

PUBLIC LAND AREAS MAKE NORTHWEST WYOMING ONE OF THE WEST'S PRIME VACATION ATTRACTIONS

Grand Teton National Park (center of map at right), Jackson Hole National Monument, Targhee National Forest, and Yellowstone National Park represent three types of government ownership of land. All areas preserve natural beauties and prevent, or control, private use. Near Moran, part of the recent gift to the people from the Rockefeller family is established as the Jackson Hole Wildlife Park, a "drive-in zoo" where bighorn sheep, moose, buffalo, black and grizzly bears, martens, and otters roam in their natural state.

Bulletin No. 5, February 6, 1950

Haarlem to Erect Statue to Boy at the Dike

IN THE North Holland town of Haarlem, the statue of a legendary hero will soon rise on one of the dikes which holds back the ocean from the below-sea-level city. The statue will depict the act of the brave little boy who saved Haarlem from flooding by holding his finger in a hole in the dike throughout a long cold night. It will symbolize the battle which the people of the Netherlands have unceasingly waged against the sea.

The Eye Polder dike of Haarlem, where the boy's figure will be placed, is one of the oldest works of the kind. It was built in the early 1600's, when Netherlanders were just getting under way their long-term program by which dikes, windmills, and drainage canals were to turn swampy lowlands into productive polders, as the reclaimed tracts are called.

First Crude Dikes Built in Middle Ages

The rescue of land in Holland, however, is an old story, which had its beginning at least 2,000 years ago. When Roman scholar Pliny the Elder visited this North Sea region around 50 A. D., he wrote that the natives, a marsh people known as Frisians, lived in coastal wastes protected by crude man-made mounds.

For centuries storms and tides of the sea intermittently devoured the water-soaked lands, villages, and livestock of these people. It was probably not until deep in the Middle Ages that Holland built its first real dikes, usually in the form of dams made of willow mattresses and clay mixed with straw.

Today dikes and other works guard millions of acres of Netherlands soil. Destruction of the pumping system, now operated largely with steam-powered and diesel-driven pumps instead of windmills, would mean ruin for much of the country. Since about a quarter of the nation's territory lies below sea level, this reclaimed and protected soil represents a major factor in agricultural production and support of population.

War-damaged Areas Recovering

During World War II, somewhat exaggerated reports were current concerning the flooding of large areas of the Netherlands by destructive salt sea water. At war's end it was found that only two major sections of the country were under sea water. One was big Walcheren Island (illustration, inside cover), in the Schelde estuary, where the dikes had been breached by Allied bombing. The other was a reclaimed district north of Amsterdam, which had been deliberately flooded, apparently as a terroristic measure, by the Germans before their retreat.

Although salt damage is still evident in these areas, agricultural experts now feel that the recovery process will be faster than was expected through the use of modern techniques.

Occasionally, through the centuries, Holland's superabundance of salt and fresh water has played a beneficial rather than hostile role. The opening of the dikes to flood water in 1574, during the war for independence against Spain, made possible water-borne defense against the invaders. On the

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hunter. It is equipped with claws as sharp as ice picks for seizing a victim. Though the owl travels south during a season of lemming migration, it rarely breeds outside its home in the Arctic Circle.

The ermine, thin and sinuous, is more successful than the fox in hunting down the lemming in the rodent's years of scarcity. The ermine can travel the lemming roads—built in the winter under a heavy blanket of snow—while the fox must smell and search and dig for his food.

As the snowy owl flies south and the fox grows thinner in search of food, the thousands of migrating lemmings push on. They die in droves along the way, "a rather tragic procession of refugees, with all the obsessed behavior of the unwanted stranger in a populous land, going blindly on to various deaths."

NOTE: Regions inhabited by the lemming and the snowy owl may be located on the Society's map of The Top of the World.

For additional information, see "Milestones in My Arctic Journeys," in the *National Geographic Magazine* for October, 1949.

EIGIL HALVORSEN FROM THREE LIONS

A SNOWY OWL GUARDS ITS NEST, HIDDEN IN THE BLOSSOM-SPANGLED UNDERGROWTH

Stripes of dark brown across its feather coat of Arctic white blend the snowy owl with the tundra vegetation. Round yellow eyes stare from a large masklike face, deep in feathers. Unlike the usual owl, generally a nocturnal bird, the snowy owl hunts both day and night.

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other hand, during World War II, the speed and force of the German attack were so overpowering that the planned flood defense was not called upon.

Because his story deals with the most distinctive aspect of the Netherlands, and because his pluck and devotion to duty seemed to represent the spirit of the country, the boy who held his finger in the dike has become a sort of national hero. The story, handed down from generation to generation, was popularized in America by two women writers of the 19th century—Phoebe Cary and Mary Mapes Dodge.

Phoebe Cary called the young hero Peter in her poem, "The Leak in the Dyke." Mrs. Dodge, in her perennial favorite, *Hans Brinker, or The Silver Skates*, simply referred to him as "a sunny-haired boy, of gentle disposition," who lived "many years ago . . . in Haarlem." The great popularity of her novel has created the widespread but erroneous impression that "the boy at the dike" story was her invention and even that Hans Brinker was the hero who saved the city.

So many travelers in Haarlem ask to see the "home" of the purely fictional Hans Brinker that the city burghers have obligingly fitted out a house to fill the bill.

NOTE: The Netherlands appears on the Society's map of Germany and Its Approaches.

For further information, see "Mending Dikes in the Netherlands" (20 photographs), in the *National Geographic Magazine* for December, 1946; "Holland Rises from War and Water," February, 1946; "Low Countries Await Liberation," August, 1944*; "Behind Netherlands Sea Ramparts," February, 1940; and "New Country Awaits Discovery," September, 1933.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 27, 1947, "Bicycle Lack Hampers Netherlands Recovery."

DE HAAS FROM THREE LIONS

LIKE A SCENE FROM HANS BRINKER IS THIS VIEW OF VOLENDAM'S SKATERS

In everyday dress, the men and women skim over IJssel Meer, the lake resulting from the damming of the Zuider Zee. Not often does it freeze over. The village of Volendam is about as far north of Amsterdam as Haarlem is west.